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PEO GAASVIK, CTO, Teracom AB

A CASE STUDY OF

Introducing HD Channels in Digital Terrestrial TV-networks – DVB-T2

THE ISSUE

Teracom AB owns and operates the Swedish terrestrial network for radio and TV.

Teracom launched the first digital terrestrial TV services in Sweden already 1999. In order to become more competitive Teracom wanted to introduce HD channels in the network during 2010 which required Teracom to upgrade their national terrestrial network in order to meet the increased capacity demand. Teracom wanted its network to be based on the new standard for Digital Terrestrial TV, DVB-T2, which offers better utilization of capacity, which can be used for HDTV and other value adding services.

THE SOLUTION

“In order to make the introduction of HDTV possible, the existing network needed more capacity”, explains PEO Gaasvik, CTO at Teracom AB.

A key requirement on the new transport network was also to provide full Ethernet functionality. To achieve this, most of the infrastructure equipment had to be exchanged, including the transport solution, wavelength system, radio links and old transmitters.

Teracom’s selection criteria for the new transport network were a cost-effective, scalable solution with full Ethernet/IP sup-

port that could handle multiple services such as distribution of TV and radio, contribution and mobile backhaul and other capacity services. The network carries distribution services both for standard and high definition television for delivery to Teracom’s end-customers. The unique Time Transfer feature for synchronizing time and frequency in the network offered by the Nimbra platform coupled with Net Insight’s strong commitment as a stable and strategic partner also reinforced Teracom’s choice. Training and support carried out by Net Insight became an integral part of the agreement.

THE COMPANY

TERACOM

The Teracom Group is Sweden’s leading media operator, offering a wide variety of communication solutions for radio and TV. The main product areas are Pay TV, radio and TV broadcasting, capacity services for data transmission and co-location services. The business is run in Sweden, Denmark and Finland through subsidiaries. In Sweden, with a population near 10 million, the broadcasting network covers approximately 99.8 percent of households.



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THE RESULTS

Extensive preparation for HDTV in the terrestrial network has taken place during 2010, with coverage for HDTV reaching about 70 percent of the population by the year-end. HD broadcasts are based on the new European standard, DVB-T2 technology, combined with MPEG-4.

The first phase of the DVB-T2 network was successfully launched by the 1st of November 2010. Teracom's new nationwide all-IP/Ethernet distribution network is the first IP-based DVB-T2 network in the world. After some months in operation, the new infrastructure functions as expected and according to PEO Gaasvik, CTO at Teracom AB, the performance exceeds expectations. A gradual expansion continues, aimed at bringing coverage to virtually all Swedish households. The DTT network should be complete in time for the summer Olympic Games in London in 2012. Adding new functionality such as GPS-independent synchronization is also in the plans for the network.

The Nimbra platform's simplicity and flexibility when adding additional services, has simplified the implementation. The Nimbra Vision management system is

used for monitoring the network, service provisioning, fault management and performance management. Through this, real-time access to valuable information with a good overview of the network and its services is always at hand.

Choosing Nimbra has brought Teracom a capable, national Swedish network, able to serve as a basis for new business and services. As each node simultaneously works both as core and access, there are no needs for compromises between present and additional traffic.

Net Insight is still highly engaged and active in the project and will stay involved for the further roll out and subsequent network development. In practice, it is regarded a common task involving e.g. joint project meetings every second week between project leaders and engineers. With a view towards the future, Net Insight looks forward to the possibility of following Teracom in its international expansion.

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